CLAIMS

1. A dental composition comprising:

(1) at least one crosslinkable and/or polymerizable silicone oligomer or polymer which is liquid at room temperature or which is heat-meltable at a temperature of less than 100°C, and which comprises:

• at least one unit of formula (FS):

$$Z-Si-(R^0)_a-O_{(3-a)/2}$$

in which:

- a = 0, 1 or 2,
- R^0, identical or different, represents an alkyl, cycloalkyl, aryl, vinyl, hydrogeno or alkoxy radical, preferably a C_1-C_6 lower alkyl,
- Z, identical or different, is an organic substituent comprising at least one reactive epoxy, and/or alkenyl ether and/or oxetane and/or dioxolane and/or carbonate functional group,

• and at least two silicon atoms,

(2) at least one aromatic hydrocarbon photosensitizer with one or more aromatic nuclei which are substituted or not, having a residual light absorption of between 200 and 500 nm,

(3) at least one dental filler present in a proportion of at least 10% by weight relative to the total weight of the composition,

(4) and an effective quantity of at least one borate-type photoinitiator, chosen from those of formula:

Δ in which the cationic entity of the borate is selected from:

(*) the onium salts of formula **(I)**:

$$[(R^1)_n\text{-}A\text{-}(R^2)_m]^+ \quad \textbf{(I)}$$

in which formula:

- A represents an element of groups 15 to 17 such as for example: I, S, Se, P or N,
- R^1 represents a carbocyclic or heterocyclic C_6-C_{20} aryl radical, it being possible for said heterocyclic radical to contain, as heteroelements, nitrogen or sulfur,
- R^2 represents R^1 or a linear or branched C_1-C_{30} alkyl or alkenyl radical; said radicals R^1 and R^2 being optionally substituted with a C_1-C_{25} alkoxy, C_1-C_{25} alkyl, nitro, chloro, bromo, cyano, carboxyl, ester or mercapto group,
- n is an integer ranging from 1 to v + 1, v being the valency of the element A,
- m is an integer ranging from 0 to v - 1 with n + m = v + 1,

(**) the organometallic salts of formula **(III)**:

$(L^1L^2L^3M)^{-q}$

in which formula:

- M represents a group 4 to 10 metal, in particular iron, manganese, chromium or cobalt,
- L^1 represents 1 ligand bound to the metal M by π by electrons, which ligand is chosen from the ligands η^3-alkyl, η^5-cyclopendadienyl and η^7-cycloheptratrienyl and the η^6-aromatic compounds chosen from the optionally substituted η^6-benzene ligands and the compounds having from 2 to 4 condensed rings, each ring being capable of contributing to the valency layer of the metal M by 3 to 8 π electrons;
- L^2 represents a ligand bound to the metal M by π electrons, which ligand is chosen from the ligands η^7-cycloheptratrienyl and the η^6-aromatic compounds chosen from the optionally substituted ligands η^6-benzene and the compounds having from 2 to 4 condensed rings, each ring being capable of contributing to the valency layer of the metal M by 6 or 7 π electrons;
- L^3 represents from 0 to 3 ligands, which are identical or different, linked to the metal M by σ electrons, which ligand(s) is (are) chosen from CO and NO_2^+; the total electron charge q of the complex to which L^1, L^2 and L^3 contribute and the

ionic charge of the metal M being positive and equal to 1 or 2;

Δ the anionic borate entity of which has the formula $[BX_aR_b]^-$ in which:

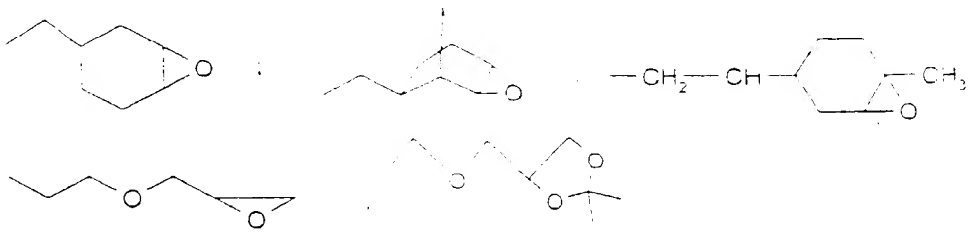
- a and b are integers ranging, for a, from 0 to 3 and, for b, from 1 to 4 with a + b = 4,
- the symbols X represent:
  - a halogen atom (chlorine, fluorine) with a = 0 to 3,
  - an OH functional group with a = 0 to 2,
- the symbols R are identical or different and represent:
  - a phenyl radical substituted with at least one electron-attracting group such as for example OCF_3, CF_3, NO_2, CN, and/or with at least 2 halogen atoms (fluorine most particularly), this being when the cationic entity is an onium of an element of groups 15 to 17,
  - a phenyl radical substituted with at least one element or one electron-attracting group, in particular a halogen atom (fluorine most particularly), CF_3, OCF_3, NO_2, CN, this being when the cationic entity is an organometallic complex of an element of groups 4 to 10,
  - an aryl radical containing at least two aromatic nuclei such as for example biphenyl, naphthyl, optionally substituted with at least one electron-

attracting group or element, in particular a halogen atom, including fluorine in particular, OCF_3, CF_3, NO_2, CN, regardless of the cationic entity.

2. The composition as claimed in claim 1, characterized in that Z is an organic substituent Z1 comprising at least one reactive epoxy, and/or dioxolane functional group, and preferably at least one reactive epoxy functional group.

3. The composition as claimed in claim 2, characterized in that the oligomer or polymer (1) comprises in addition other reactive functional groups Z such as the reactive alkenyl ether, oxetane and/or carbonate functional groups Z2.

4. The composition as claimed in any one of the preceding claims, characterized in that the reactive functional group(s) of Z1 are chosen from the following radicals:



5. The composition as claimed in any one of the preceding claims, characterized in that the photoinitiator is chosen from the group consisting of:

$[(\Phi)_2\,I]^+,\ [B(C_6F_5)_4]^-$

$[C_{12}H_{25}\text{-}\Phi\text{-}I\text{-}\Phi]^+,\ [B(C_6F_5)_4]^-$

$[(C_8H_{17})\text{-}O\text{-}\Phi\text{-}I\text{-}\Phi)]^+,\ [B(C_6F_5)_4]^-$

$[(\Phi)_2S\text{-}\Phi\text{-}O\text{-}C_8H_{17}]^+,\ [B(C_6H_4CF_3)_4]^-$

$[(\Phi)_3\,S]^+,\ [B(C_6F_4OCF_3)_4]^-$

$[(\Phi\text{-}CH_3)_2\,I]^+,\ [B(C_6F_4OCF_3)_4]^-$

$[(C_8H_{17})\text{-}O\text{-}\Phi\text{-}I\text{-}\Phi)]^+,\ [B(C_6F_5)_4]^-$

$[(C_8H_{17}\text{-}O\text{-}\Phi)_2I]^+,\ [B(C_6F_5)_4]^-$

$[(\Phi)_3S]^+,\ [B(C_6F_5)_4]^-$

$[(C_{12}H_{25}\text{-}\Phi)_2I]^+,\ [B\,(C_6F_5)_4]^-$

$[(\Phi\text{-}CH_3)_2I]^+,\ [B(C_6F_5)_4]^-$

$[CH_3\text{-}\Phi\text{-}I\text{-}\Phi\text{-}CH(CH_3)_2]^+,\ [B(C_6F_5)_4]^-$

$(\eta^5\text{-cyclopentadienyl})(\eta^6\text{-toluene})\ Fe^+,\ [B(C_6F_5)_4]^-$

$(\eta^5\text{-cyclopentadienyl})(\eta^6\text{-methyl-1-naphthalene})\ Fe^+,\ [B(C_6F_5)_4]^-$

$(\eta^5\text{-cyclopentadienyl})(\eta^6\text{-cumene})\ Fe^+,\ [B(C_6F_5)_4]^-$

and the mixture thereof.

6. The composition as claimed in any one of the preceding claims, characterized in that the photosensitizer is chosen from the group consisting of:

4,4'-dimethoxybenzoin; 2-4-diethylthioxanthone

2-ethylanthraquinone; 2-methylanthraquinone;

1,8-dihydroxyanthraquinone; dibenzoylperoxide;

2,2-dimethoxy-2-phenylacetophenone;

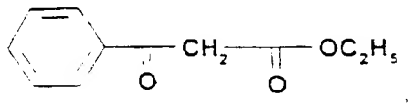
benzoin;

2-hydroxy-2-methylpropiophenone;

benzaldehyde;

4-(2-hydroxyethoxy)phenyl-(2-hydroxy-2-methylpropyl)-ketone;

benzoylacetone;

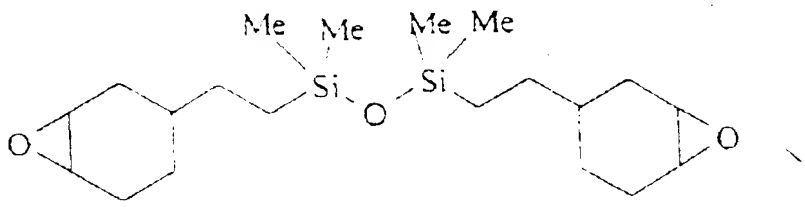


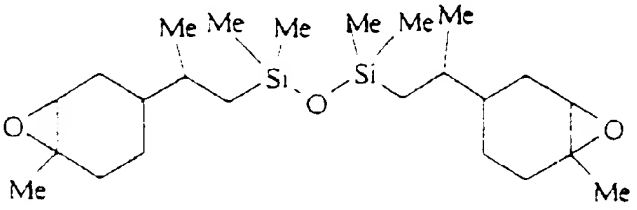
2-isopropylthioxanthone; 1-chloro-4-propoxy-thioxanthone;

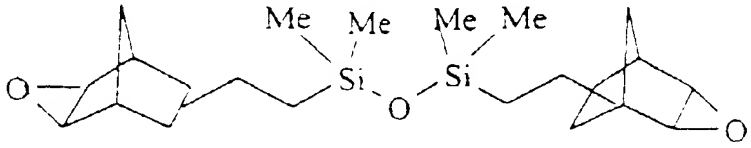
4-isopropylthioxanthone; and the mixture thereof.

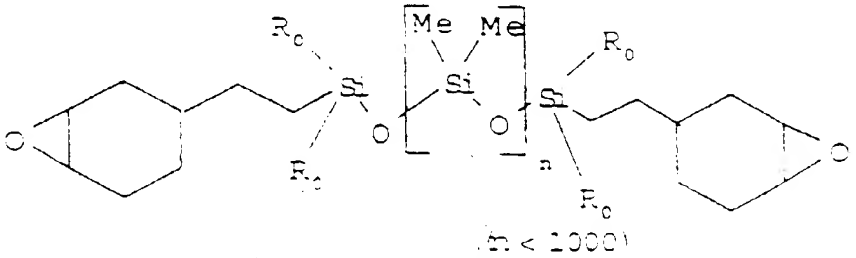
7. The dental composition as claimed in any one of the preceding claims, characterized in that the silicone oligomer and/or polymer (1) consists of at least one silicone having the following average formula:

a)

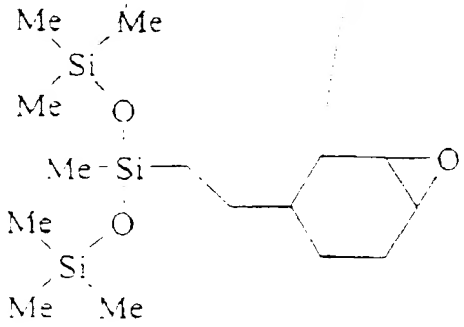


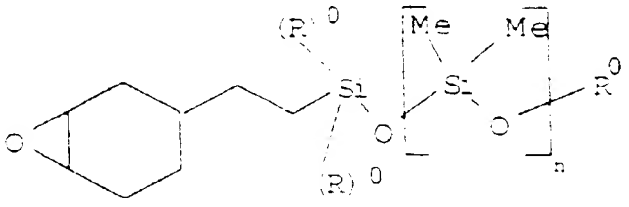
b) 

c) 

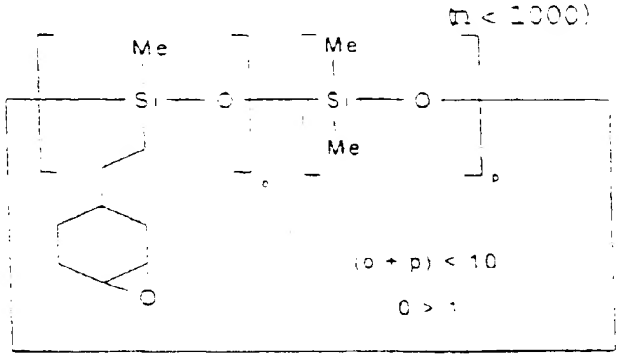
d) 

(n < 1000)

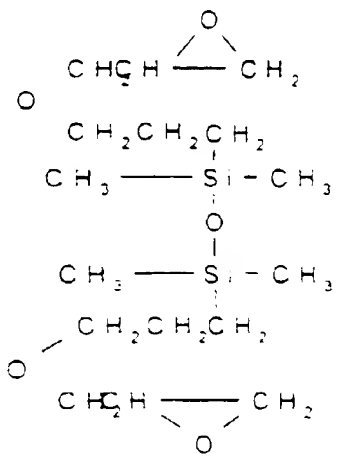
e) 

f) 

(n < 1000)

g) 

h)



8. The use of a dental composition as claimed in any one of the preceding claims for the production of dental prostheses.

9. The use of a dental composition as claimed in any one of claims 1 to 7, for dental restoration.

10. A dental prosthesis which can be obtained from a composition as claimed in any one of claims 1 to 7.

11. A dental restoration material which can be obtained from a composition as claimed in any one of claims 1 to 7.